**WEEK – 7(HandsOn)**

**React**

**13. ReactJS-HOL**

**Objectivies**

**1.Explain various ways of conditional rendering**

React allows different ways to render UI conditionally:

**🔹 a. Using if-else statements**

if (isLoggedIn) {

return <Dashboard />;

} else {

return <Login />;

}

🔹 b. **Ternary operator**

{isLoggedIn ? <Dashboard /> : <Login />}

🔹 c. **Logical && operator**

{hasNotification && <Notification />}

🔹 d. **Element variables**

let content;

if (isAdmin) {

content = <AdminPanel />;

} else {

content = <UserPanel />;

}

return <div>{content}</div>;

**2. How to Render Multiple Components**

You can render multiple components inside a parent <div> or <React.Fragment>:

**Example:**

function App() {

return (

<div>

<Header />

<Sidebar />

<Content />

<Footer />

</div>

);

}

**3. Define List Component**

A list component renders a dynamic list of items, usually using map().

**Example:**

function OfficeList() {

const offices = ['Chennai', 'Bangalore', 'Delhi'];

return (

<ul>

{offices.map((city, index) => <li key={index}>{city}</li>)}

</ul>

);

}

**4. Explain Keys in React Applications**

**Keys** help React **identify which items have changed, added, or removed** in a list.  
They should be **unique and stable**.

**🔹 Why are keys important?**

* Helps React optimize re-rendering
* Prevents unwanted reordering or duplication

**5. How to Extract Components with Keys**

* When rendering a list, you often want to extract a separate component. Pass the key **to the outer component**, not inside it.

function Office({ name }) {

return <li>{name}</li>;

}

function OfficeList() {

const offices = ['Chennai', 'Bangalore', 'Delhi'];

return (

<ul>

{offices.map((city, index) => (

<Office key={index} name={city} />

))}

</ul>

);

}

**6. Explain React map() / map() Function**

The map() function in React is used to **render a list of elements** dynamically from an array.

**Syntax:**

array.map((item, index) => {

return <Element key={index} />;

});

**Example:**

const names = ['Anu', 'Ravi', 'Kiran'];

const nameList = names.map((name, i) => <li key={i}>{name}</li>);

**CODE:**

**src/App.js:**

import React from "react";

function App() {

  return (

    <div style={{

      minHeight: "100vh",

      display: "flex",

      justifyContent: "center",

      alignItems: "flex-start",

      gap: 40,

      fontFamily: "Arial, sans-serif"

    }}>

      {/\* Column 1: Course Details \*/}

      <div style={{minWidth: 250, padding: "10px"}}>

        <h1 style={{fontSize: "2rem"}}>Course Details</h1>

        <div style={{margin: "30px 0 10px 0"}}>

          <span style={{fontWeight: "bold", fontSize: "1.4rem"}}>Angular</span><br/>

          <span style={{fontSize: "1rem"}}>4/5/2021</span>

        </div>

        <div>

          <span style={{fontWeight: "bold", fontSize: "1.4rem"}}>React</span><br/>

          <span style={{fontSize: "1rem"}}>6/3/20201</span>

        </div>

      </div>

      {/\* Vertical line \*/}

      <div style={{borderLeft:"4px solid green", height:"330px"}} />

      {/\* Column 2: Book Details \*/}

      <div style={{minWidth: 250, padding: "10px"}}>

        <h1 style={{fontSize: "2rem"}}>Book Details</h1>

        <div style={{margin: "20px 0 0 0", fontWeight: "bold"}}>Master React</div>

        <div>670</div>

        <div style={{margin: "20px 0 0 0", fontWeight: "bold"}}>Deep Dive into Angular 11</div>

        <div>800</div>

        <div style={{margin: "20px 0 0 0", fontWeight: "bold"}}>Mongo Essentials</div>

        <div>450</div>

      </div>

      {/\* Vertical line \*/}

      <div style={{borderLeft:"4px solid green", height:"330px"}} />

      {/\* Column 3: Blog Details \*/}

      <div style={{minWidth: 250, padding: "10px"}}>

        <h1 style={{fontSize: "2rem"}}>Blog Details</h1>

        <div style={{margin:"24px 0 0 0"}}>

          <span style={{fontWeight:"bold", fontSize:"1.4rem"}}>React Learning</span>

          <br />

          <span style={{fontWeight:"bold", fontSize:"1rem"}}>Stephen Biz</span>

          <br />

          <span>Welcome to learning React!</span>

        </div>

        <div style={{margin:"24px 0 0 0"}}>

          <span style={{fontWeight:"bold", fontSize:"1.3rem"}}>Installation</span>

          <br />

          <span style={{fontWeight:"bold", fontSize:"1rem"}}>Schwezdenier</span>

          <br />

          <span>You can install React from npm.</span>

        </div>

      </div>

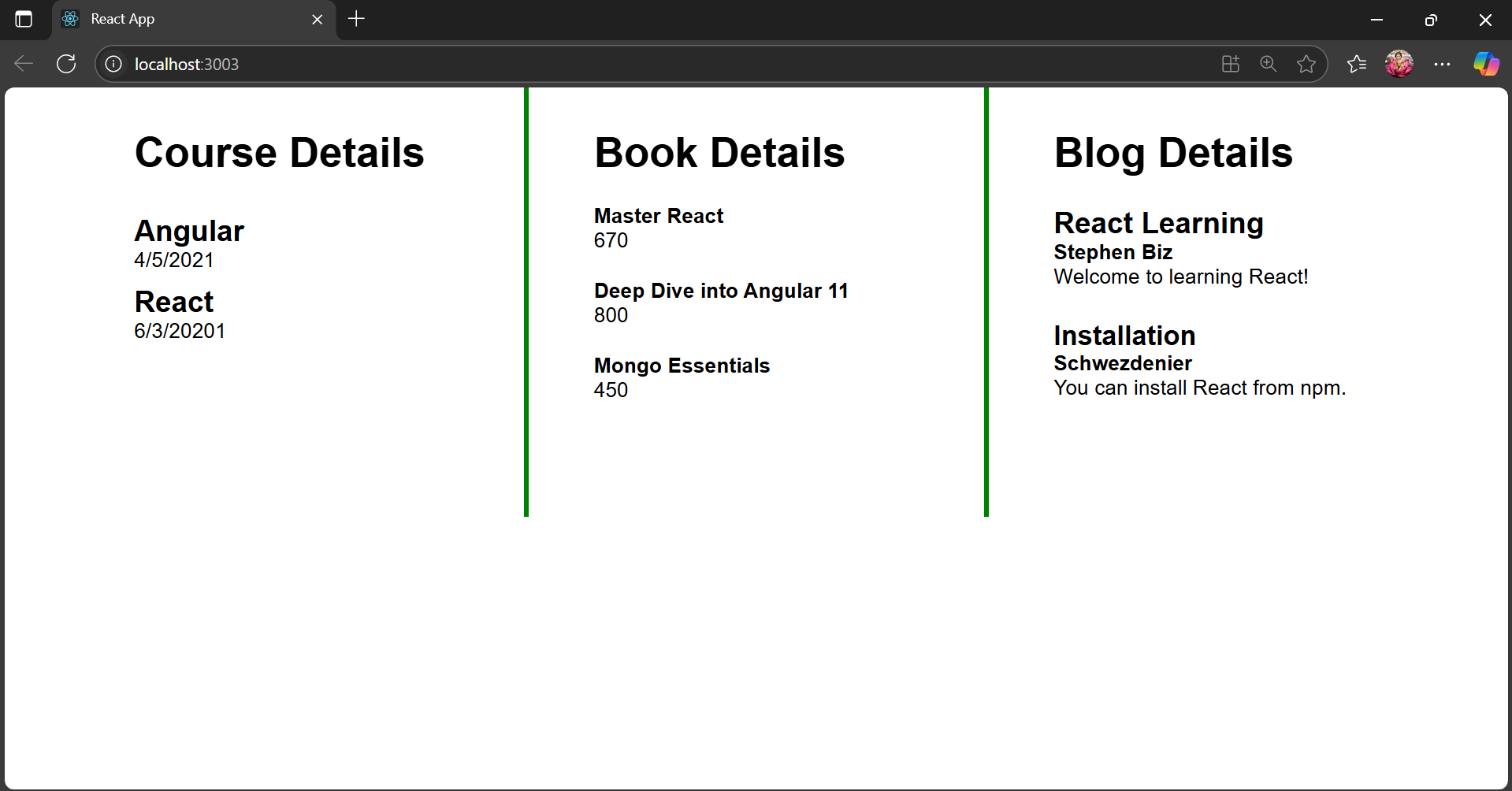
    </div>

  );

}

export default App;

**OUTPUT:**

****